(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 20 October 2005 (20.10.2005)

PCT

(10) International Publication Number WO 2005/097337 A1

(51) International Patent Classification7:

B05B 1/28

(21) International Application Number:

PCT/US2005/009852

(22) International Filing Date: 24 March 2005 (24.03.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/557,103

26 March 2004 (26.03.2004) US

- (71) Applicant (for all designated States except US): GRACO MINNESOTA INC. [US/US]; PO Box 1441, Minneapolis, MN 55440-1441 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BLOOM, Michael E. [US/US]; 19961 Poppy Street, Oak Grove, MN 55303 (US). DALEY, Thomas P. [US/US]; 1940 Kyle Place, Golden Valley, MN 55422 (US). BREZNY, Tera D. [US/US]; 2325 Iverson Court, Lino Lakes, MN 55038 (US).

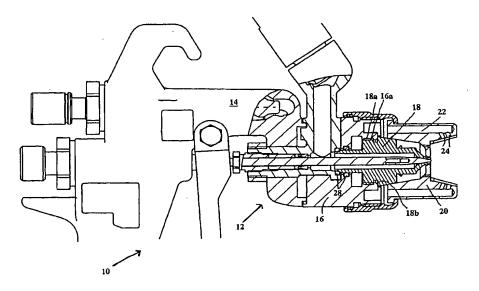
- (74) Agent: FARROW, Douglas B.; PO Box 1441, Minneapolis, MN 55440-1441 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

[Continued on next page]

(54) Title: AIR SPRAY GUN IMPROVEMENTS IN NOZZLE AND AIRCAP



(57) Abstract: The feeder passages (22) in the aircap (20) of an air spray gun (10) are slots which are significantly wider than the horn exit holes (24). This construction makes centerline offset much more forgiving by providing a consistent intersection of the passages. The feeder passages (22) are also deeper in that they extent past the intersection point (26) again making them more forgiving of irregularities. Sealing and seating of the nozzle (18) to the fluid inlet (16) have also been improved over the prior art. In the instant invention, o-rings (28) seal the nozzle (18) to the fluid inlet (16) and allow the shoulder (18b) of the nozzle (18) to seat squarely on the spray housing (14) controlling angularity.



005/007337 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.